GAMBIT 3

AMERICA'S EYES IN SPACE

NRO launched 54 Gambit 3 from July 1966 – April 1984.

The U.S. Air Force launched Gambit systems from Vandenberg Air Force Base. The Gambits used the Agena D upper stage to provide power, attitude control, and orbital adjusts in space.

Launch of Gambit 3 Mission G3 on 12/14/1966, using a Titan IIIB launch vehicle (Titan II core booster with Agena D upper stage).

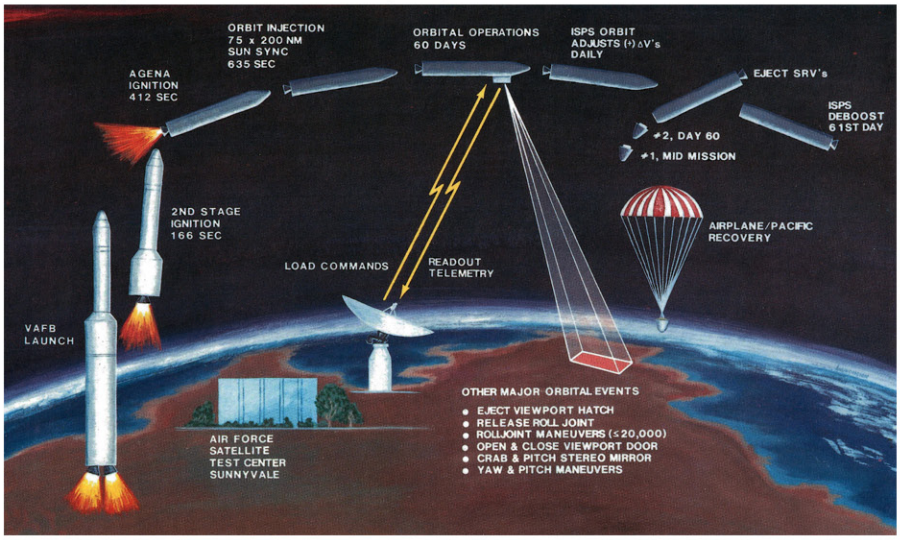
ORIGINS OF PHOTORECONNAISSANCE

Following World War II, the United States developed new photoreconnaissance capabilities to penetrate the denied areas in the Soviet Union, Eastern Europe, and Asia. President Eisenhower directed the Central Intelligence Agency to develop the U-2 reconnaissance plane, and later the more innovative supersonic A-12, in order to improve the nation's photoreconnaissance capabilities. He also directed the CIA to develop, in conjunction with the U.S. Air Force, the nation's first photoreconnaissance satellite, codenamed Corona. First launched in 1960, Corona operated with much less risk than photoreconnaissance aircraft and searched broad areas to capture incredibly valuable imagery while orbiting high above the Earth. These air and space platforms propelled the United States into an unparalleled position of dominance in photoreconnaissance capabilities that helped the U.S. win the Cold War.

INTELLIGENCE NEED FOR PHOTORECONNAISSANCE

Although Corona provided the capability to search large areas from space, the U.S. still lacked high resolution imagery. Approximately one year after the first launch of Corona, the National Reconnaissance Office began development of its first high resolution satellite program, codenamed Gambit. Over time, the Gambit program evolved into two different systems. The first Gambit system, launched in 1963, was equipped with the KH-7 camera system that included a 77-inch focal length camera for providing specific information on scientific and technical capabilities that threatened the nation. Intelligence users often characterized this capability as surveillance, allowing the United States to track the advancement of Soviet and others' capabilities. The second system, Gambit 3 was equipped with the KH-8 camera system that included a 175-inch focal length camera. The system was first launched in 1966 and provided the U.S. with exquisite surveillance capabilities from space for nearly two decades. The NRO launched a final system, codenamed Hexagon, in 1971 to improve upon Corona's capability to search broad and wide denied areas for threats to the United States. The system sometimes carried a mapping camera to aid in U.S. military war planning. The United States depended on these search and surveillance satellites to understand the capabilities, intentions, and advancements of those who opposed the United States during the Cold War. Together they became America's essential eyes in space.

Launch, operation, and recovery sequence for Gambit 3



Film-return photoreconnaissance satellites returned the exposed film to Earth from space in a bucket with a heat shield designed to withstand the entry through Earth's atmosphere.

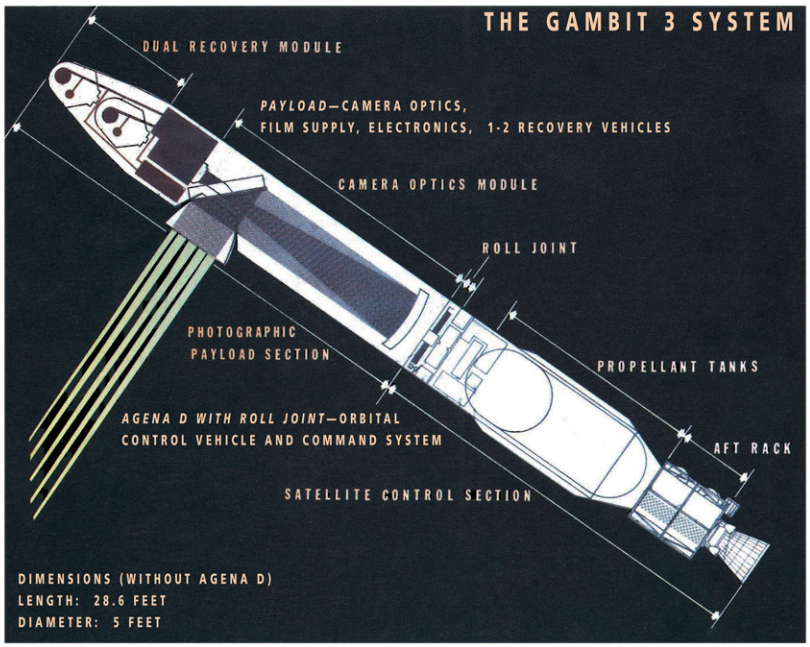
NATIONAL RECONNAISSANCE OFFICE

50 YEARS OF VIGILANCE FROM ABOVE

GAMBIT 3 (KH-8)

AMERICA'S EYES IN SPACE

Gambit 3, with its efficient target acquisition and high image resolution, enhanced surveillance capabilities from July 1966 – April 1984.

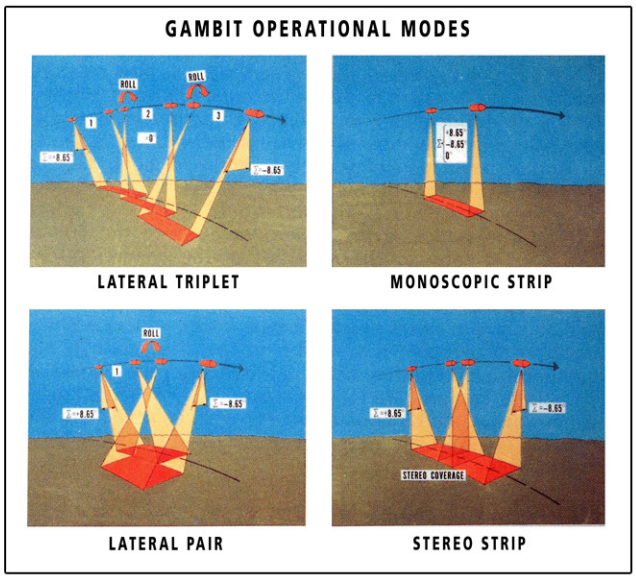


PROGRAM FACTS

Missions: 54 (50 successes)
Average Mission Life: 31 days
Imaging Days: 5-126 days
Altitude: 65-90 nautical miles
Roll Control: mechanical roll joint
Payload Weight: 4,130 lbs
Image Retrieval: Film Return Capsule

OPTICS/IMAGING

Aperture: 43.5 inches
Focal Length: 175 inches
Camera Developer: Eastman Kodak
Lens: f/4.09
Image Resolution: better than 2 feet
Film Length: up to 12, 241 ft
Film Width: 5 inches and 9 inches



ADVANCEMENTS

The roll joint integrated with the attitude control resulted in extremely stable body rates, zero settling times, and improved expendables management—significantly increasing the number of targets it acquired.

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